Diffraction of the Surface Electromagnetic Waves by an Impedance Step (Discontinuity)

impedance discontinuities, while the modulus of the transmission coefficient becomes smaller. If the left-hand side semi-plane is an ideal conducting surface ($Z_2 = 0$), the magnetic waves are reflected more strongly than the electric waves, provided the slowing-down of their phase velocities is the same. The radiation pattern is in the form of a lobe, having a maximum in the forward direction and is inclined to the z axis at a certain angle. The width of the lobe and its elevation angle are dependent on the ratio of the two impedances; Z_1 and Z_2 can be chosen in such a way that the lobe and the radiation diagram has the desired width and elevation angle. The author expresses his gratitude to Prof. Ya.N. Fel'd for his help. The paper contains 5 figures and 5 Russian references.

SUBMITTED: July 19, 1956

AVAILABLE: Library of Congress

Card 5/5

TRENEV, N.G.

109-3-2-1/26

AUTHOR: Trenev, N.G.

TITLE: Diffraction of the Surface Electromagnetic waves on a Semi-infinite Impedance Plane (Difraktsiya poverkhnostnykh elektromagnitnykh voln na polubeskonechnoy impedansnoy ploskosti)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol.III, No.2, pp. 163 - 171 (USSR).

ABSTRACT: A similar problem was dealt with by the author in an earlier work (see Ref.1). Some of the mathematical methods used in that work are also employed in the present paper. The problem considered is as follows. An E-type wave impinges on a semi-infinite plane (see Fig.1), having an impedance Z on both the lower and the upper sides. The wave has components as given by:

$$H_x^o = Ae^{-ihz+i\sqrt{k^2-h^2}y} \qquad (1)$$

$$E_z^o = \frac{A}{k}\sqrt{k^2-h^2}e^{-ihz+i\sqrt{k^2-h^2}y} \qquad (2)$$

where the propagation constant h is determined from:

Cardl/5

Diffraction of the Surface Electromagnetic Waves on a Semi-infinite Impedance Plane

$$\frac{h}{k} = \sqrt{1 + z^2} \qquad (3)$$

The solution of the problem for the upper semi-space ($y > 0$) is in the form of a sum of the incident wave as given by Eqs. (1) and (2) and an integral of the plane waves as expressed by Eqs. (4) and (5); for the lower semi-space ($y < 0$), the integral of the plane waves is given by Eqs. (6) and (7). Functions $f_1(w)$ and $f_2(w)$ are the unknowns which should be determined. It is found that if the functions have to satisfy the conditions expressed by Eqs. (10) to (13), they must be in the form of Eqs. (15) and (16). From the last two equations, it follows that H_x for the upper semi-space can be expressed by Eq.(22), where functions φ^+ and φ^- are expressed by Eqs. (23) and (24); the last two equations were derived in the author's previous work (Ref.1). Consequently, the final expression for H_x is given by Eq.(25). From this, it is possible to evaluate the directional diagram of the system and this is in the form of Eq.(28). For the lower semi-space,

Diffraction of the Surface Electromagnetic Waves on a Semi-infinite Impedance Plane

H_x is given by Eq.(30). These equations were employed to construct the directional diagrams of the system and these are shown in Fig.2. An expression for the modulus of the reflection coefficient is given and this is in the form of:

$$|R| = \sqrt{\frac{\frac{h}{k} - 1}{\frac{h}{2-\frac{h}{k}}}} \qquad (33).$$

It is also shown that the transmission coefficient has the same value as R (see Fig.3). If it is assumed that the impedance of the two surfaces is identical in magnitude but different in sign, the functions $f_1(w)$ and $f_2(w)$ are given by Eqs.(39) and (40) and the H_x component is expressed by Eqs.(43) and (44). The directional diagram is then given by Eq.(45) and the transmission coefficient is expressed by:

Card3/5

Diffraction of the Surface Electromagnetic Waves on a Semi-infinite Impedance Plane

$$|R| = \sqrt{\frac{\frac{h}{k} - 1}{\frac{h}{k} + 1}} \qquad (48) .$$

A graph of the reflection coefficient is given in Fig.4.
From the above investigation, it is concluded that an impedance semi-plane gives rise to a reflected and transmitted wave and produces a radiation field. However, the transmitted wave is obtained only when the impedances of both sides of the semi-surface are identical. The modulus of the reflection coefficient is equal to that of the transmission coefficient and increases as a function of the slow-down factor. If the impedance of the upper semi-space is Z and that of the lower is $-Z$, there is only one reflected surface wave: the modulus of the reflection coefficient increases with increasing slow-down coefficient and tends to unity.
The author thanks Professor Ya.N. Fel'd for his help.
There are 4 figures and 3 references, 2 of which are Russian and 1 English.

Card4/5

109-3-2-1/26

Diffraction of the Surface Electromagnetic Wares on a Semi-infinite Impedance Plane

SUBMITTED: July 19, 1956

AVAILABLE: Library of Congress

Card 5/5 1. Electromagnetic waves-Diffraction 2. Mathematical analysis

TIGNEV, VITALII

TIGNEV, VITALII. Amurskaia ekspeditsiia Nevel'skogo. Moskva, Voennoe izd-vo Ministerstva vooruzhennykh sil SSSR, 1946, 151 p.
"Bibliografiia": p. 153-55.

DLC: Unclass.

SO: LC, Soviet Geography, Part I, 1951, Uncl.

TRENEV, Vitalii.

TRENEV, Vitalii. Amurskaia ekspeditsiia Nevel'skogo. Moskva, Voennoe Izd-vo Ministerstva vooruzhennykh sil SSSR, 1946. 151 p.

"Bibliografiia": p.153-55.

DLC: Unclass.

So: LC, Soviet Geography, Part II, 1951/Unclassified

TREMEV, Vitaliy Konstantinovich; GOZHENKO, T.A., red.; KAKHRAMANOVA, I.M., tekhn. red.

[Path to the ocean] Put' k okeanu. Moskva, Sovetskii pisatel', 1958. 447 p. (MIRA 11:9)
(Russia—Navy)

FILIMONOV, G.F., kand.fiziko-matemat.nauk [translator]; TRENIEVA, S.N., kand.tekhn.nauk [translator]; AYZIKS, Yu.D., inzh. [translator]; OVCHAROV, V.T., red.; AKALUHIN, S.A., red.; VOROHIN, K.P., tekhn.red.

[Traveling-wave tube; translated articles] Lampa s begushchei volnoi; sbornik perevodnykh statei. Moskva, Gos.energ.izd-vo, 1959. 150 p. (MIRA 13:1)
(Traveling-wave tubes)

TRENEVA, S.N.

TRENEVA, S.N.

Electron guns for producing solid and hollow cone-type electron beams with high current density. Radiotekh. i elektron. 2 no.7: 925-934 Jl '57. (MLRA 10:9)

(Electron beams)

TRENEVA, S.N.

Pulsed electron gun for controlling beams of high-density current.
Prib. i tekh. eksp. 8 no.3:177-178 My-Je '63. (MIRA 16:9)
(Electron beams)

AUTHOR: TRENEVA,S.N.

TITLE: Electron Guns for Producing Solid and Hollow Cone-Type Electron Streams with High Current Density. (Elektronnyye pushki dlya formirovaniya sploshnykh i polykh konusoobraznykh potokov s bol'shoy plotnost'yu toka, Russian)

109-7-11/17

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol 2, Nr 7, pp 925-934 (U.S.S.R.)

ABSTRACT: One-potential guns with electrodes of simple shape are described. They were developed for the production of solid and hollow cone-type electron streams with high current density. A method of calculation and a series of diagrams for the determination of electrode measurements according to given parameters of the bundle at the gun output is given. The guns operate at the zero potential at the cathode-electrode. 98 - 100% of the entire bundle stream pass through the anode opening of such guns. These guns can be used in travelling wave tubes, in klystrons, and in other devices for which strong solid or hollow cone-type electron bundles are required. (With 19 Illustrations).

ASSOCIATION: Not given

PRESENTED BY:

SUBMITTED: 17.1.1957

AVAILABLE: Library of Congress

Card 1/1

TRENEVSKI, N.; BREZJANIN, Dj.T.; TRAJKOV, I.

Should measles be considered an anergic disease? Tuberkuloza 15 no.1:98-109 Ja-Mr '63.

1. Infektivna klinika Medicinskog fakulteta u Skopju.
(TUBERCULOSIS IN CHILDHOOD) (MEASLES)
(STATISTICS)

S

BREZJANIN, Risto, Dr.; TRENEVSKI, Nikola, dr.

Combined treatment of tuberculous meningitis with streptomycin and isoniazid in pregnancy. Tuberkuloza, Beogr. 8 no.3-4:174-175 May-Aug 56.

1. Klinika za infektivne bolesti--Skoplje.

(TUBERCULOSIS, MENINGEAL, in pregn.
ther., isoniazid with streptomycin (Ser))
(PREGNANCY, compl.
tuberc., meningeal, ther., isoniazid with streptomycin (Ser))
(ISONIAZID, ther. use
tuberc., meningeal in pregn., with streptomycin (Ser))
(STREPTOMYCIN, ther. use
tuberc., meningeal in pregn., with isoniazid (Ser))

TRENDAFELOV, D., dotsent; POPIANKOV, B.

A thermodynamic calculation of the solubility product. Nauch. tr. vissh. med. inst. Sofia 41 no.4:51-56 '62.

1. Predstavena ot dots. D. Trendafelov.
(CHEMISTRY, ANALYTICAL)

TRENDAFELOV, D.; MIKHAILOVA, D.

Studies of the triple salt system of sodium, cadmium and ammonium nitrates. Nauch. tr. vissh. med. inst. Sofia 41 no.4:57-66 '62.

1. Predstavena ot dots. D. Trendafelov.
(NITRATES) (SODIUM) (CADMIUM)

BELYAYEV, Igor' Aleksandrovich; PAVLOV, Igor' Valentinovich; TRENIKHIN, Oleg Konstantinovich; MILOVIDOV, L.G., inzh., retsenzent; SIDOROV, N.I., inzh., red.; VOROTNIKOVA, L.F., tekhn. red.

[Construction and operation of an a.c. contact network] Ustroistvo i ekspluatatsiia kontaktnoi seti peremennogo toka. Moskva, Vses.izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 219 p. (MIRA 15:2)
(Electric railroads—Wires and wiring)

UFIMTSEV, N.I.; TRENIKHIN, O.K.

At the electrified a.c. sections of the Krasnoyarsk railroad. Elek. i tepl. tiaga 5 no.3:28-29 Mr '61. (MIRA 14:6)

1. Nachal'nik distantsii kontaktnoy seti st. Bazaikha (for Ufimtsev).
2. Nachal'nik Krasnoyarskogo uchastka energosnabzheniya (for Trenikhin).
(Electric railroads)

TRENIN, Boris Konstantinovich; ZAVARZA, N.T., red.; KOMAR'KOVA, L.M., red. izd-va; SUNGUROV, V.S., tekhn.red.

[Standard forms of field books and instrument records used in topographic and geodetic works] Tipovye formy polevykh zhurnalov, pasportov, instrumentov, ispol'zuemye na topografo-geodezicheskikh rabotakh. Moskva, Geodezizdat, 1962. 351 p. (MIRA 15:7)
(Topographical surveying)

TRENIN, O. (L'vov)

Electronic organ based on a mouth harmonica. Radio no.1:41-42 Ja '65. (MIRA 18:4)

TRENIN, S.I.; CHEKHOV, V.N.; SHEVLYAKOV, Yu.A.; SHEVCHENKO, V.P. (Dnepropetrovsk)

"General solution of the equations of shallow shells and some estimates of the bending theory"

Report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow 29 Jan - 5 Feb 64.

S/186/60/002/006/021/026
A051/A129

AUTHORS: Nefedov, V. D.; Sinotova, Ye. N.; Trenin, V. D.

TITLE: A study of the isotope exchange in the system $Bi^*(C_6H_5)_3$ - $Bi(C_6H_5)_3Cl_2$ - alcohol.

PERIODICAL: Radiokhimiya, v. 2, no. 6., 1960, 739 - 742

TEXT: The kinetics of isotope exchange was investigated and the reaction rate constants of this exchange were determined, as well as the order of reaction and energy of activation. The exchange kinetics were studied in order to obtain a clearer understanding of the behavior of radioactive bismuth forms in the exchange during the beta-decay processes of the natural bismuth isotopes. The initial compounds were obtained according to methods described in Ref. 4 (K. A. Kocheshkov, A. P. Skoldinov, Sintet. metody v oblasti metallorgan. soyedineniy sur'my i vismuts.(Synthetical methods in the field of metallorganic antimony and bismuth compounds) Izd. AN SSSR, M.-L., 8, 1947). The solubility of bismuth triphenyl and bismuth triphenyldichloride in alcohol at various temperatures was investigated in order to determine the conditions of separation of

Card 1/4

A study of the isotopes exchange in ....

the exchanging compounds. The isotope exchange in the given system was studied according to the method described by the author (Ref. 1: V. D. Nefedov; Tao Syao-en, Zhurn. Pekinsk. univ., 4, 383, 1959). The experimental results showed that the reaction of isotope exchange in the given system is of the first order with respect to each of the components. The reaction rate constants were calculated from the formula:

$$K = \frac{-2.3 \lg (1 - F)}{(a + b)\, t},$$

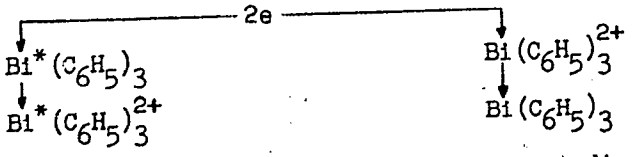
where F is the degree of exchange, a - the concentration of $Bi^*(C_2H_5)_3$ or $Bi(C^{14}C_5H_5)_3$ (in M), b - the concentration of $Bi(C_6H_5)_3Cl_2$ (in M), t - the time of exchange (in hours). The activation energy was found to be equal to 15.900 cal/mole. The investigated compounds were regarded as pseudoatoms and their derivative (Ref. 5: R. Garzuly, L. Grimm. Organometalle. Sammlung chem. techn. Vortraege, 29. Stuttgart, 1927). From this stand point one of the compounds participating in the exchange ($Bi(C_6H_5)_3$) is regarded as a pseudoatom of mercury, and the other ($Bi(C_6H_5)_3Cl_2$) as its salt. Thus, the investigated case of isotope exchange is considered to be a true solution of a pseudometal and its salt. An

Card 2/4

S/186/60/002/006/021/026
A051/A129

A study of the isotope exchange in ....

assumption is made that the isotope exchange in the given system has an electronic nature, whereby the electrons shift according to the scheme:



I ensures the isotope exchange of Bi amongst the studied chemical forms. The low value of the activation energy is also thought to signify the presence of an electronic exchange. The use of doubly-labelled compounds can serve to solve the nature of the exchange mechanism in the given system and others similar to it. A comparison of the kinetic characteristics of the isotope exchange in the systems $Sb(C_6H_5)_3$ - $Sb(C_6H_5)_3Cl_2$ - alcohol and $Bi(C_6H_5)_3$ - $Bi(C_6H_5)_3Cl_2$ - alcohol led to the conclusion that the isotope exchange in these two systems have similar rates of reaction. The cause of the similarity in the kinetics of exchange in the two systems is thought to be due to similar values of the bond energies of the 5s-electrons in the pseudoatom $Sb(C_6H_5)_3$ and that of the 6s-electrons of the

Card 3/4

S/186/60/002/006/021/026
A051/A129

A study of the isotope exchange in .....

pseudoatom $Bi(C_6H_5)_3$. A study of other similar systems, such as $As(C_6H_5)_3$ - - $As(C_6H_5)_3Cl_2$, is recommended in order to clarify this question. There are 4 tables, 4 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: September 19, 1959.

Card 4/4

L 28386-66 EPF(n)-2/EWT(m)/ETC(f)/EWG(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6001792 SOURCE CODE: UR/0089/65/019/006/0517/0521

AUTHOR: Kaminker, D. M.; Konoplev, K. A.; Semenov, Yu. P.; Trenin, V. D.

ORG: Physicotechnical Institute im. A. F. Ioffe of AN SSSR (Fiziko-tekhnicheskiy institut AN SSSR)

49
42
8

TITLE: Reduction of radioactive discharges into the atmosphere and investigation of water deaeration conditions in the primary loop of VVR-M reactor 19

SOURCE: Atomnaya energiya, v. 19, no. 6, 1965, 517-521

TOPIC TAGS: nuclear research reactor, nuclear reactor technology, nuclear reactor component, isotope/VVR-M nuclear reactor

ABSTRACT: The design and the two-year operation of the closed deaeration loop of the VVR-M reactor are discussed. The reactor was installed at the Physicotechnical Institute im. A. F. Ioffe. The experience with this reactor disclosed that radioactive discharges into the atmosphere from experimental holes and hot channels were unimportant in comparison with the radiolytic and gas discharges from the deaerator. It was mentioned that the Ar-41 isotope was the main product of the bombardment of the air by neutrons. The radioactive gas discharge was reduced by using a closed deaeration system for removing and burning detonation gas. The gas from the deaerator being preheated in a 10-kw heater was delivered to a 7-liter platinum catalyzer where a slow buring process

2

Card 1/2 UDC: 621.039.586:539.16.04

L 28386-66

ACC NR: AP6001792

7

of gas took place. The hydrogen-free air was then cooled to 25 C in a condenser and returned back to the deaerator. The system was illustrated by a diagram. The discharged oxygen-hydrogen gas was not of an explosive nature. Removal of hydrogen dissolved in the water of the primary loop was considered. It was shown that the amount of detonation gas or hydrogen from the loop interconnections and from the reactor water surface was relatively small. An additional amount resulted from the effect of radiolysis and recombination processes. The effect of water temperatures upon the hydrogen contents in the air was investigated and graphically illustrated showing the hydrogen decrease with the increase in temperature. The amount of hydrogen increased with the reactor power capacity only up to a certain limit. This is explained by the effect of gas recombination. All these physical and chemical factors were discussed and a conclusion was drawn that not all hydrogen was removed from the water of the primary loop. It is stated, however, that the use of a closed deaeration loop and the burning of detonation gas reduced the discharge of radioactive gases into the atmosphere more than ten times. The closed loop was designed and constructed by E. N. Babulevich, V. V. Goncharov and Yu. G. Nikolayev. Gratitude is expressed to these members of Physicotechnical Institute as well as to E. A. Volkhonskiy, B. S. Razov, V. A. Solov'yev and I. K. Yursha for their advices given on this subject. Orig. art. has: 8 figures.

SUB CODE: 18 / SUBM DATE: 16Feb65 / ORIG REF: 003 / OTH REF: 002

Card 2/2 UDC

KAMINKER, D.M.; KONOPLEV, K.A.; SEMENOV, Yu.P.; TRENIN, V.D.

Reduction of radioactive fallout into the atmosphere and a study of water deaeration of the primary contour in a water-moderated water-cooled reactor. Atom. energ. 19 no.6:517-521 D '65.
(MIRA 19:1)

ACCESSION NR: AP4036534 S/0089/64/016/005/0456/0457

AUTHORS: Ganzha, V.D.; Konoplev, K.A.; Trenin, V.D.; Sharov, V.T.

TITLE: Ion exchange installation for preparing reactor feed water

SOURCE: Atomnaya energiya, v. 16, no. 5, 1964, 456-457

TOPIC TAGS: ion exchange water desalting, reactor water desalting, water desalting, reactor feed water, water cooled reactor, moderated reactor

ABSTRACT: The article describes an ion exchange water desalting installation to provide water feed for water cooled and moderated reactors. The installation has been designed at the Physical-Technical Institute im. A.F. Ioffe, An SSSR as a substitute for an unsatisfactory electric distillation plant at the VVR-M reactor, which has low capacity, rapid scale forming, and low electrical resistivity of final product). The described installation produces 3 m^3/hr feed water with 1 mg/l. salt, and less than 0.02 mg/l chloride ions. The water supply is adequate for a regeneration cycle of 50 m^3. Artesian water is used as feed for desalting (400 mg/l. salts, mostly Ca and Mg). Cation exchange resin KU-2 and anion exchange

Card 1/2

ACCESSION NR: AP4036534

resin EDE-10P were used with 250 l. swollen resin loaded into each filter. Two airlift containers with H_2SO_4 and NaOH provided for regeneration. A diagram of the installation shows 4 filters, 2 regeneration containers and subsidiary equipment. Water control is achieved by continuous measurement of specific electric resistivity and intermittent chemical analyses. The installation has been in operation since 1961. "The authors acknowledge B.P. Konstantinov's suggestion to switch over to ion exchange desalting, D.M. Kaminker's help in the operation; P.P. Kory*stin's and I.V. Volf's help (All-union Scientific Research Inst. of Hydrotechnical and Sanitary Engineering) in laboratory tests and project recommendations." Orig. art. has: 1 figure and 1 table.

ASSOCIATION: None

SUBMITTED: 08Aug63 ENCL: 00

SUB CODE: NP,GC NR REF SOV: 000 OTHER: 000

Card 2/2

GANZHA, V.D.; KONOPLEV, K.A.; TRENIN, V.D.; SHAROV, V.T.

Ion-exchange apparatus for producing feed-water for a reactor.
Atom.energ. 16 no. 5:456-457 My '64. (MIRA 17:5)

MADYANOV, Aleksandr Mikhaylovich, kand. tekhn. nauk; CHUDNER, Rudol'f Vital'yevich; FERMITIN, Vladimir Yevgen'yevich; TRENIN, Valeriy Fedorovich

[Solidification and pouring of steel under a liquid medium] Zatverdevanie i razlivka stali pod zhidkoi sredoi. Moskva, Metallurgiia, 1965. 90 p. (MIRA 18:7)

TRENIN, V.P.

Computation of mean gradients in the transition zone. Trudy GOIN no.63:95-103 '61. (MIRA 14:8)
(Oceanography)

TRENINA, G.A.; BIBIKOVA, M.V.; SARUKHANOVA, L.Ye.

Production of mutants with oxidation defect in various yeast species. Mikrobiologiia 34 no.2:300-304 Mr-Ap '65.
(MIRA 18:6)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.

TRENKA, Sandor, dr.; PARASZKAY, Gyula, dr.

Actions of expropriation and servitude from the point of view of comparative law, criticism, and practice. Geod kart 15 no. 6:435-443 '63.

LABUTIN, A.L.; KALINICHEVA, N.A.; KACHALOVA, R.V.; TRENKE, K.M.

New organic solvents and their possible application to the lacquer and paint manufacture. Lakokras. mat. i ikh prim. no.3:25-26 '61. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni S.V. Lebedeva.
(Solvents)
(Paint industry)

27544
S/138/61/000/006/002/006
A051/A129

15.9201

AUTHORS: Labutin, A. L., Klebanskiy, A. L., Tsukerman, N. Ya., Kartsev, V. N., Trenke, Yu. V., Mal'shina, L. P., Borovikova, N. A., Karelina, G. G., Rozhkov, Yu. P.

TITLE: "Liquid nairite" - a new material for rubberizing

PERIODICAL: Kauchuk i rezina, no. 6, 1961, 5 - 8

TEXT: The authors state that in the chemical destruction of "liquid" nairite, highly concentrated solutions can be produced which are applicable as a material for rubberizing. In the USSR a safer binary solvent, consisting of 2 weight parts of ethylacetate and 1 w.p. of gasoline is used in nairite adhesives. Experiments showed, however, that this solvent in "liquid" nairite is not suitable for many technical reasons. Better results were obtained in using a ternary solvent consisting of 76% solvent, 19% turpentine and 5% n-butanol. The latter component does not dissolve the nairite, but facilitates the use of the brush for painting and good coating distribution. It was noted that film vulcanization from liquid nairite at 20°C does not show positive results. Thus various forms of thermal vulcanization were investigated: vulcanization with heated air, live vapor, hot water

Card 1/6

"Liquid nairite" - a new material for rubberizing

and infra-red irradiation. It was established that the most suitable method was vulcanization by hot air. The physico-mechanical indices of nairite coatings vulcanized in air at various temperatures are given in Fig. 1. Fig. 2 shows the relationship between the temperature and duration of the vulcanization. The most suitable temperatures of vulcanization in air are within the range of 100 - 142°C. It was noted that the liquid nairite coatings did not possess the proper adhesion to metal. Thus certain other adhesives or coatings ensuring better adhesion between metal and coating were sought. The best results were obtained with the following three materials: standard leuconate (organic base: n, n', n" - triisocyanate-triphenylmethane), chloronairite adhesive (organic base: chloronairite and nairite) and a primer, tentatively called epoxide primer (organic base: epoxide resin, chloronairite and nairite). The chemical stability and anti-corrosion properties of the vulcanized nairite coatings were studied. The conclusion was drawn that 1.2-mm nairite coatings in combination with a water-resistant coating applied three times can reliably protect metals from corrosion due to aqueous solutions of many acids, alkali and salts. The coatings were not resistant to the action of oxidizing agents, aromatic and halided solvents. Rubber coatings differ from varnish and plastic coatings by an increased resistance to abrasive wear. An attempt was made

Card 2/6

27544
S/138/61/000/006/002/006
A051/A129

"Liquid nairite" - a new material for rubberizing

to determine the resistance of nairite coatings under conditions of dry friction using the Grosselli-type machine. It is concluded that coatings of so-called crystallizing liquid nairite obtained in low-temperature polymerization are superior to other rubbers in their wear-resistance, excepting vulcollane, which has a unique resistance to abrasive wear. It was established that coatings of liquid oil nairite are superior to coatings of bakelite, polyethylene and caprone, when tested in rapidly flowing sea water. Tests have further shown that liquid nairite as a material for coatings will become widely used in industry in the next few years. At present tests are being conducted in the North Sea and the Atlantic Ocean on propellers of fishing trawlers coated with liquid nairite for protection from corrosion, erosion and cavitation. Mechanical plants are testing steel covers of refrigerators and condensators coated with nairite. These were previously manufactured from non-ferrous metals. Certain chemical plants have installed diaphragm valves, the interior of which is covered with liquid nairite to prevent corrosion from acid solutions, alkali and salts. The possibility of using nairite coatings in various instruments as a means for preventing spark formation in percussion has also been revealed. Finally, it was established that these coatings can be used in certain constructions for hermetic sealing. At the Moscow TETs NO 12 a vacuum-condensator of a mass-produced 50 thousand kw steam turbine withstood a

Card 3/6

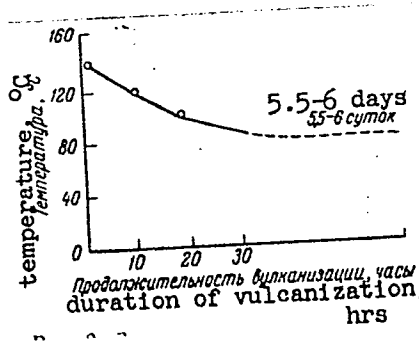
27544
S/138/61/000/006/002/006
A051/A129

"Liquid nairite" - a new material for rubberizing

testing period of one and a half years with the brass pipes and steel pipe boards coated with liquid nairite. K. S. Shmurey, O. P. Abolina, A. I. Konstantinova and G. A. Selivanovskaya took part in the work. There are 2 tables and 2 sets of graphs.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber im. S. V. Lebedev)

Fig. 2. Dependence of the vulcanization duration of the coatings made of liquid nairite on the temperature



Card 4/6

31619
S/138/61/000/012/001/008
A051/A126

15.9205

AUTHORS: Aver'yanov, S.V.; Poddubnyy, I.Ya.; Trenke, Yu.V.; Aver'yanova, L.A.

TITLE: Vulcanization of methylsiloxane rubber with a low vinyl group content, under action of γ-emission

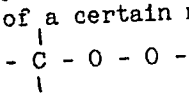
PERIODICAL: Kauchuk i rezina, no. 12, 1961, 1 - 7

TEXT: An investigation was conducted to determine the conditions for producing highly heat-resistant radiation vulcanizates of the CKTB (SKTV) rubber. The possibility was studied for producing rubbers of even higher heat-resistance by introducing compounds into the rubber mix which would increase the magnitude of the intermolecular action in the system and the effective tensility of the bonds in the vulcanizates, as well as by changing the conditions of emission. Laboratory samples of methylvinylsiloxane SKTV-0.07 rubber, with a molecular weight of 400 - 500 thousand, were investigated. The energy of the γ-emission dose was held within the limits of 0.28 to 0.72 Mr/h. A study of the tensility of the γ-emission vulcanizates of the SKTV-0.07 rubber filled with various silica gels and carbon blacks, showed that the introduction of met-

Card 1/3

Vulcanization of methylsiloxane rubber with a ....

als with varying valencies into the silica gel filled rubber mixes increases the physico-mechanical indices considerably. Preliminary refining of the rubber mixes further increases the physico-mechanical indices. Experiments showed that rubbers, retaining satisfactory tensile and elastic properties, can be produced from the above-mentioned sample, after thermal aging at a temperature of 380°C. The additional increase of the heat-resistance in the given rubbers is achieved by radiation vulcanization in a vacuum and by introducing a halogenated polymer into the rubber mixture. In the latter case, vulcanizates are produced which retain satisfactory tensility and elasticity after short-time aging at 400°C. A study of the effect of metal compounds of varying valencies and of the halogenated polymer after introduction into the rubber mix revealed that the former, being centers of secondary electron radiation, lead to the formation of more regular vulcanization network and, subsequently, to a further increase in the heat-resistance of the radiation vulcanizates. The SKTV radiation vulcanizates show a characteristic intensified destruction in the initial period of the thermal aging, which is thought to be connected with the presence of a certain number of weak oxygen-containing transverse bonds of the



type in the radiation vulcanizates. These bonds, in turn,

Vulcanization of methylsiloxane rubber with a .....

are formed through the reaction of oxidation of the molecular chains of the polysiloxanes under the action of irradiation. The radiation vulcanizates of the SKTV-0.07 rubber were found to exceed corresponding peroxide vulcanizates in their heat-resistance and thermal stability in a closed system at 200 and 250°C and at increased pressure. The former have a lower residual deformation after compression at 150 - 250°C and a somewhat higher frost-resistance. There are 5 tables, 1 figure and 10 references: 6 Soviet-bloc and 4 non-Soviet-bloc. The reference to the most recent English-language publication reads as follows: L. E. St. Pierre, H.A. Dewhurst, J. Phys. Chem., 64, no. 8, 1,060 (1960).

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva (All-Union Scientific-Research Institute of Synthetic Rubber im. S.V. Lebedev)

DOLGOPOL'SKIY, I.M.; TRENKE, Yu.V.

Course of the reaction of hydrogen chloride addition to vinylacetylene. Zhur.ob.khim. 33 no.3:773-777 Mr '63. (MIRA 16:3)

(Hydrochloric acid)
(Butenyne)

AVER'YANOV, S.V.; PODDUBNYY, I.Ya.; AVER'YANOVA, L.A.; TRENKE, Yu.V.

Radiation vulcanization of heterosiloxane rubber. Kauch. i rez. 22 no.8:1-8 Ag '63. (MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva.

DOLGOPOL'SKIY, I.M.; TRENKE, Yu.V.; BLYUMENTAL', M.Kh.

Synthesis and isomerization of 4-chloro-1,2-butadiene. Zhur.ob.khim. 33 no.4:1071-1074 Ap '63. (MIRA 16:5)
(Butadiene) (Isomerization)

L 14502-66 EWT(m)/EWP(j) RM

ACC NR: AP6006364 (A) SOURCE CODE: UR/0413/66/000/002/0096/0096

INVENTOR: Aver'yanov, S. V.; Poddubnyy, I. Ya.; Aver'yanova, L. A.; Trenke, Yu. V.

ORG: none

TITLE: Thermal stabilization of polysiloxanes [Class 39, No. 178109]

SOURCE Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 96

TOPIC TAGS: polysiloxane, thermal stability, dialkyl sebacate

ABSTRACT: An Author Certificate has been issued for a preparative method for the thermal stabilization of polysiloxanes, involving the use of dialkyl sebacates as the stabilizing additives. [BO]

SUB CODE: 11/ SUBM DATE: 09Dec63/ ATD PRESS: 4199

Card 1/1 UDC: 678.84:678.048

32149 R
S/119/60/000/010/007/014
B116/B206

9.7100

AUTHOR: Gol'dbaum, I. Ya., Engineer, Zakharov, V. K., Candidate of Tchnical Sciences and Trenkin, N. T., Engineer

TITLE: Telemetering system for special digital computers

PERIODICAL: Priborostroyeniye, no. 10, 1960, 18 - 21

TEXT: The telemeter described here is used in a system of centralized recording and control of monetary operations. This study was conducted at the laboratoriya avtomatiki i telemekhaniki LPI im. M. I. Kalinina (Laboratory of Automation and Telemechanics LPI imeni M. I. Kalinin) jointly with the Konstruktorskoye byuro po proyektirovaniyu schetnykh mashin (Design Office for the Planning of Computers). The great reliability of the information connections is achieved by the following measures: 1) a two-pole combination pulse $(\frac{5}{2})$-code is used for the transmission, the number of pulses of each polarity being constant. A certain number of significant pulses for the code of each order is controlled. 2) The total number of pulses in the code series is controlled during

Card 1/ 1

Telemetering systems for special ...

reception. 3) The receiving devices control the amplitude and duration of the code pulses of both polarities, the quadrature of which is higher by at least one order of magnitude than noise in the communication lines 4) At any irregularity of the code, the transmission is automatically doubled, until a proper result is obtained 5) The entire device is made of ferrites and transistors operating as keys The block diagram of the system for telemetering of data is described by means of Fig 1 The commutator KC makes the connection between the central computer 1 and the required subscriber computer AM(abonentskiye mashiny) The address of the main storage cell with the necessary information is compiled in the instruction installation 3 (according to the program). The transmission device 4 controlled by 3, feeds the code series via the communication line into the receiver- and transformer device 5, which evaluates the quadrature of the pulses received. If the latter is smaller than the control quadrature, the pulses separated according to polarity, are fed into the normalizer 6 of the address code, where the address of the main storage cell is formed and combination characteristics of the code are controlled The information received from the main storage cell of the AM reached the

Card 2/10

the buffer storage cell 7 from where it is fed to 4, to receive the order from 1. The information in 7 is not erased thereby. The receiver- and transformer device of the central machine 1 operates analogously to that of the subscriber machine AM. Only the most specific blocks of the system are described. Fig. 2 shows the circuit of the receiver- and transformer device. It warrants the following: selection of the input pulses according to the amplitude; according to polarity and duration; the forming of two current pulse trains characterizing the code structure. Separation according to amplitude and polarity is carried out by the amplifier T_1 - T_2 forming the positive pulses, and the amplifier T_6 - T_7 forming the negative pulses. Due to the feedback (R_1 and R_2 respectively), these amplifiers have a relay characteristic and the voltages at their outputs do not depend on the amplitude of the input pulses, if the latter exceeds a certain value. To the collector circuits of the transistors T_2 and T_7, the differentiating transformers Tp_1 and Tp_4 are connected. These eliminate the fronts of the pulses, the latter preparing the blocking oscillators T_4 and T_9 (for the selection of the pulse duration) via the

Telemetering systems for special...

amplifier stages T_3 and T_8. Characteristical for this circuit is the transformer Tp_2 (Tp_5) with a ferrite with a rectangular hysteresis loop, making it possible to obtain a pulse at the output, independent of the duration of action of the voltage at the input. The duration of the selections depends on C_1, R_3, R_4 (C_2, R_5, R_6) and is adjusted by the potentiometer R_1 (R_6). The negative code pulses are previously inverted by the transistor T_{10}, and reach only then the input of the selector T_9 of the negative pulses. To avoid the development of spurious information pulses at the output of the circuit, the blocking oscillators T_4 and T_9 operate in response to the starting of the duplicating blocking oscillators T_5 and T_{11}, which in a normal state are blocked by means of the voltage U_{CM} and are only started by the main pulses. According to the amplitude, the spurious pulses are smaller by a multiple than the main pulses and are not able to start T_5 and T_{11}. Fig. 3 shows the transmission device.

4

Card 4/10

Telemetering systems for special...

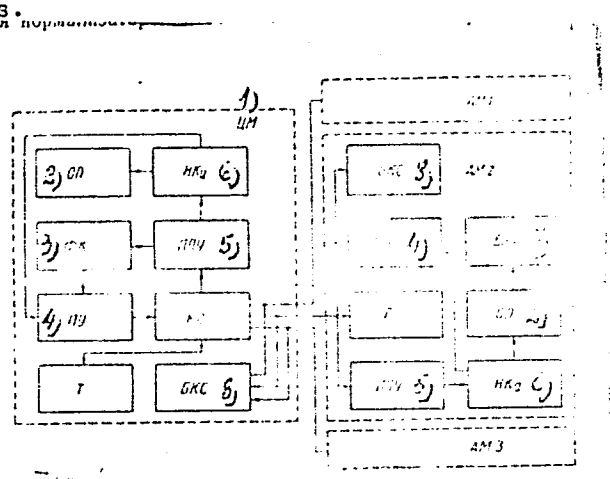
It serves for forming code pulse trains of necessary duration, amplitude and polarity. The code pulses of 10 μsec duration and 20 v amplitude are formed by the univibrators T_1 - T_3 and T_4 - T_6, to the inputs 1 and 2 of which the control pulses arrive from the device for transforming the parallel code into a serial code. At the output, a sequence of positive and negative pulses develops thereby, according to the working sequence of the univibrators. The working sequence is determined by the structure of the combination $\binom{5}{2}$-code. In it, each numerical place is transmitted by 2 negative and 3 positive pulses. Fig. 4 shows the circuit for the control of the communication lines. The main element of this circuit is the magnetic amplifier with positive feedback, which is controlled by the current flowing through the lines. In the case of a short circuit or disruption of connection, the control current disappears and the lamp A_1 is extinguished. The operating coils of the magnetic amplifier are fed by a push-pull blocking oscillator with transistors. Characteristic of this oscillator is the separation of the load circuit from the feedback circuit by means of the two transformers Tp_1 and Tp_2, making it possible

Card 5/10

Telemetering systems for special...

to eliminate the no-load losses and to increase the efficiency accordingly. There are 4 figures and 3 tables.

Legend to Fig.1:
Block diagram of the system with telemetering of the data: AM_1 - AM_3 are the subscriber computers, T is the telephone



Card 6/ 10

TRENKNER, Mieczyslaw; SYLWANOWICZ, Wojciechl JAWORSKI, Jan

Duodenal polyp. Pol. przegl. chir. 37 no.11:1168-1169 N '65.

1. Z Kliniki Chirurgicznej Instytutu Gluzlicy (Kierownik: prof..dr. L. Manteuffel).

HORNOWSKI, Sergiusz; SZAGINSKI, Walerian; TRENKNER, Mieczyslaw

Surgical therapy of pulmonary tuberculosis. Gruzlica 31 no.4: 331-336 '63.

1. Z Oddzialu Chirurgicznego Instytutu Gruzlicy w Warszawie Kierownik: prof. dr med. L. Manteuffel Dyrektor: prof. dr med. W. Jaroszewicz.
(PNEUMONECTOMY) (STATISTICS)
(TUBERCULOSIS, PULMONARY)

TRENKOV, Iv.; POSTNIKOVA [translator]; GANCHEV, G. [translator]

A method of solving the systems of normal equations in the leveling of large triangulation networks. Izv geod BAN no.4: 69-81 '63.

TRENKOV, Khr.

Bibliographic sources in surgery and related disciplines.
Khirurgiia (Sofiia) 16 no.6:566-574 '63.

(SURGERY) (ANESTHESIOLOGY) (ORTHOPEDICS)
(SURGERY, PLASTIC) (NEUROSURGERY) (UROLOGY)
(LIBRARIES, MEDICAL) (BIBLIOGRAPHIES)

TRENKOV, Khr.

SURNAME, Given Names

Country: Bulgaria

Academic Degrees: Dr

Affiliation: not indicated

Source: Sofia, Priroda, Vol X, No 4, July/August 1961, pp 111-112

Data: " Review of V.L. LEVINE.'s book "Bibliographic Reference Book of Biology" (published in the USSR). "

GPO 981643

TRENKOV, Khr., bibliograf

Bibliographic citations for articles in medical publications.
Khirurgiia 15 no.4:417-431 '62.

(BIBLIOGRAPHY)

TROFIMOV, V.I., gornyy inzh.; TRENOGIN, M.A., gornyy inzh.

Mining systems for thin steeply dipping seams with filling and ore delivery in containers. Gor.zhur. no.2:14-16 F '58. (MIRA 11:3)
(Mining engineering) (Mine filling)

32505
S/044/61/000/011/028/049
C111/C444

16.4600

AUTHOR: Trenogin, V. A.

TITLE: On the ramification of the solutions of nonlinear equations in the analytic case

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1961, 75, abstract 11B401. (Tr. Mosk. fiz.-tekhn. in-ta, 1959, vyp. 3, 276-283)

TEXT: Let a nonlinear operator $F(x,y)$ be given which transforms the direct sum of the Banach spaces $E + E_1$ into the Banach space E_2, $F(x,y)$ being expansible into an F-power series in a certain neighborhood of (x_o, y_o):

$$F(x,y) = Ah - Bg + \sum_{r+s \geq 2} F_{rs} h^r g^s ;$$

$$A = \frac{\partial F(x_o, y_o)}{\partial x} ; \quad B = \frac{\partial F(x_o, y_o)}{\partial y} ;$$

Card 1/4

32505
S/044/61/000/011/028/049
C111/C444

On the ramification of the . . .

$$F_{rs} = \frac{1}{(r+s)!} \frac{\partial^{r+s} F(x_o, y_o)}{\partial x^r \partial y^s} ;$$

$$h \equiv x - x_o; \; y = y - y_o \; .$$

Considered is the following problem: Determine the solutions of the equation

$$F(x,y) = 0, \quad y(x_o) = y_o,$$

or

$$Bg = Ah + \sum_{r+s \geq 2} F_{rs} h^r g^s; \quad g(0) = 0 \; . \qquad (1)$$

The equation (1) is solved by searching for the solution a series in terms of fractional powers. But first of all some properties of series in terms of homogeneous operators are investigated. Let 0 be a point of the spectrum of the operator B; let $\varphi_1, \ldots, \varphi_n$, respectively φ_1^* ... φ_n^* be linearly independent systems of eigen elements of the

Card 2/4

On the ramification of the . . .

operator B respectively of the adjoint operator B^*, corresponding to the eigenvalue 0. In order to determine small solutions of the equation (1), one writes down the ramification equation. In the present paper one investigates such cases, where it is possible to determine the solutions as series in terms of homogeneous operators with fractional homogeneity exponents. One assumes that not all numbers $\varphi^*_j(F_{02}\varphi_i\varphi_k)$ are zero; then one searches the solution with the set-up $g = \sum_{k=1}^{\infty} g_{k/2}$, where $g_{k/2}$ are homogeneous operators with the homogeneity exponent k/2. First of all the solution is determined formally, then the convergence of the series is proved by aid of majorising series. If $\varphi^*_j(F_{0k-1}\varphi_{\alpha_1},\ldots,\varphi_{\alpha_{k-1}}) = 0$ for all $j = 1,2,\ldots,n$ and all indices α_i, but not all $\varphi^*_j(F_{0k}\varphi_{\alpha_1}\ldots\varphi_{\alpha_k})$ being zero, then one searches the solution with the set-up $g = \sum_{i=1}^{\infty} g_{i/k}$.

Card 3/4

32505
S/044/61/000/011/028/049
C111/C444

On the ramification of the . . .

Note of the editor: According to the wish of the author we state: in lemma2 the pseudoresolvent is not exactly defined; there should be put

$$\tilde{B} = B - \sum_{j=1}^{n} z_j \gamma_j$$

where $z_j \in E_2$ and being chosen such that $\varphi_i^*(z_j) = \delta_{ij}$, i, j = 1 ... n. Now holds $\hat{B}\varphi_k = -z_k$ and everything else remains correct.

[Abstracter's note: Complete translation.]

Card 4/4

TRENOGIN V.A.

SUBJECT USSR/MATHEMATICS/Theory of functions CARD 1/1 PG - 691
AUTHOR TRENOGIN V.A.
TITLE On the uniqueness of the representation of the functions of several variables as a superposition of functions of a smaller number of variables in Banach spaces.
PERIODICAL Doklady Akad.Nauk 110, 184-187 (1956)
reviewed 4/1957

The present paper contains the generalization of some results due to Neiŝuler (Uspechi mat.Nauk 3, 6, (1948); Doklady Akad.Nauk 85, 1211 (1952)) to the case of non-linear operators which transfer Banach spaces one into another. The proofs base on notions of the linear and functional dependence and on the generalization of the theorem on implicit functions.

INSTITUTION: Physical-technical Institute, Moscow.

TRENOGIN, V.A.

Asymptotic behavior of solutions of almost linear parabolic equations with parabolic boundary layer. Usp. mat. nauk 16 no.1:163-169 Ja-F '61. (MIRA 14:6)

(Differential equations)

TRENOGIN, V.A., dotsent

Asymptotics of solutions of quasi-linear hyperbolic equations with a hyperbolic boundary layer. Trudy MFTI no.9:112-127 '62. (MIRA 16:5)

(Differential equations) (Boundary layers)

TRUSHENKOV, I.I., kandidat tekhnicheskikh nauk.

Review of modern tractor industry and trends of its development.
Avt.i trakt.prom. no.6:39-45 Je '57. (MLRA 10:8)
(Tractor industry)

BELYAYEV, I.A., inzh.; TRENIKHIN, O.K.

Some conclusions from the use of a.c. contact networks. Elek. i tepl. tiaga 4 no.10:12-15 O '60. (MIRA 13:10)

1. Nachal'nik uchastka energosnabzheniya (for Trenikhin).
(Electric railroads—Wires and wiring)

ГЕРЦЕНОВА, К.Н.

GERTSENOVA, Klara Naumovna; OCHERET'KO, Aleksandr Konstantinovich; TRENIN, B.K., redaktor; KOMAR'KOVA, L.M., redaktor izdatel'stva; KUZ'MIN, G.M., tekhnicheskiy redaktor

[Manual of photogrammery] Posobie po fotogrammetricheskim rabotam. Moskva, Izd-vo geodezicheskoy lit-ry, 1956. 325 p. (MIRA 9:7)
(Aerial photogrammetry)

TRENIN, I.

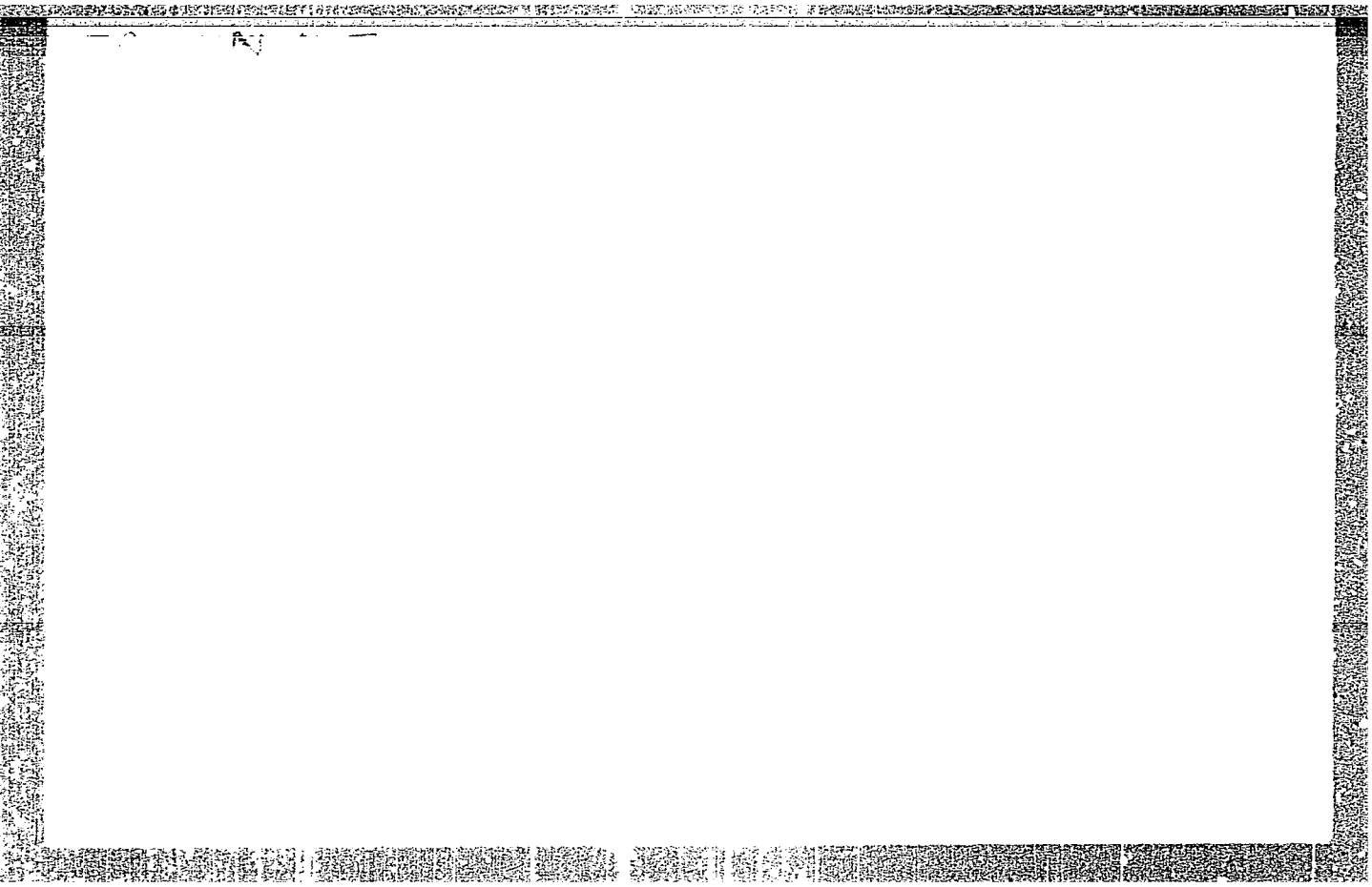
Closer to life. Mast.ugl. 8 no.9:25 S '59. (MIRA 13:2)

1. Direktor Korkinskoy srednoy shkoly No.1.
(Chelyabinsk Province--Coal miners)

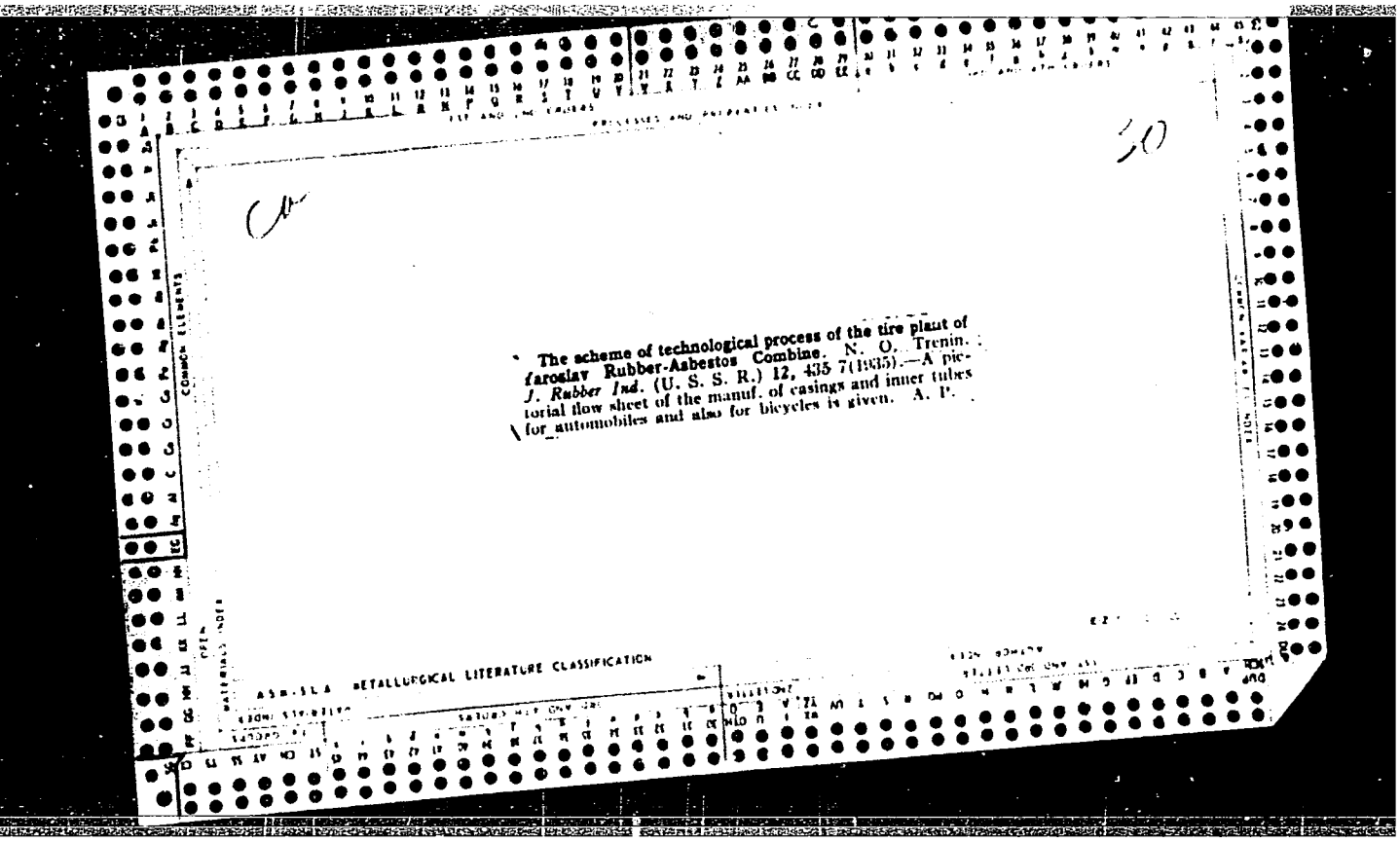
TRENINA, G.A.

Distribution of antagonistic sporeforming bacteria in different soil types [with summary in English]. Biul.MOIP. Otd.biol. 63 no.4:93-100 Jl-Ag '58 (MIRA 11:11)

(SOIL MICRO-ORGANISMS)
(BACTERIAL ANTAGONISM)
(BACTERIA, SPOREFORMING)



APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R001756520012-2"



The scheme of technological process of the tire plant of Yaroslav Rubber-Asbestos Combine. N. O. Trenin. *J. Rubber Ind.* (U. S. S. R.) 12, 435 7(1935).—A pictorial flow sheet of the manuf. of casings and inner tubes for automobiles and also for bicycles is given. A. P.

TREMIN, S. I.

"Application of Castillano's Variational Method to an Axisymmetrical Problem in the Theory of Elasticity." Sub 22 Nov 51, Sci Res Inst of Mechanics and Mathematics, Moscow State U imeni M. V. Lomonosov.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

TRENIN, S. I.

USSR/Physics - Elasticity Theory Feb 53

"Solutions to the Equations of Equilibrium in the Axisymmetrical Problem of Elasticity Theory," S. I. Trenin, Chair of Elasticity Theory

Vest Moskov U, Ser Fiz-Mat i Yest Nauk, No 1, pp 7-14

Considers the solution to the eqs of equilibrium of the axisymmetrical problem of elasticity theory which were obtained by S. P. Timoshenko, B. G. Galerkin, P. F. Papkovich, A. Lyav, A. Feppl and L. Feppl, and V. K. Prokopov. Here the author clarifies the following three matters: (a) the role of limitations which

269T95

are imposed on the stress function when the equilibrium eqs are satisfied by the solns; (b) their mutual connection and the possibility of their transitions from one form of soln to another; (c) their generality. Presented 12 Apr 52.

IA 242T93

USSR/Mathematics - Elasticity Theory Jun 52

"Construction of a Method of Solution of a Number of Axially Symmetric Problems of the Theory of Elasticity," S. I. Trenin, Chair of Theory of Elasticity

"Vest Moskov U, Ser Fiz, Mat, 1 Yest Nauk" No 4, pp 3-14

Establishes method which may be applied to various problems such as equil of cylinder under action of two equal and oppositely directed loads, bend of thick plate under various mutually balanced loads, compression of cylindrical sample by loads at its bases. Second and third problems are solved by author in a general case. Received 30 Oct 51.

242T93

TRENIN, S. I.

242T93

TRENIN, S.I.

Elasticity

Devising a method for solving a series of antisymmetrical problems on the theory of elasticity
Vest. Mosk. Un., no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, DECEMBER 1952 ~~1953~~, Uncl.

Mathematical Reviews.
May 1954
Mechanics.

Trenin, S. I. On solutions of the equilibrium equations of the axially symmetric problem of the theory of elasticity. Vestnik Moskov. Univ. Ser. Fiz.-Mat. Estest. Nauk 8, 7–13 (1953). (Russian)

The author lists a number of the known general solutions of the equations of linear elasticity for static, axially symmetric problems. Relations connecting the various solutions are given. *J. L. Ericksen* (Washington, D. C.).

10-13-54

TRENIN, V.P.

Use of fluorescein in determining the direction of surface currents in the sea. Trudy GOIN no.37:73-78 '59.
(MIRA 13:4)

(Ocean currents) (Fluorescein)

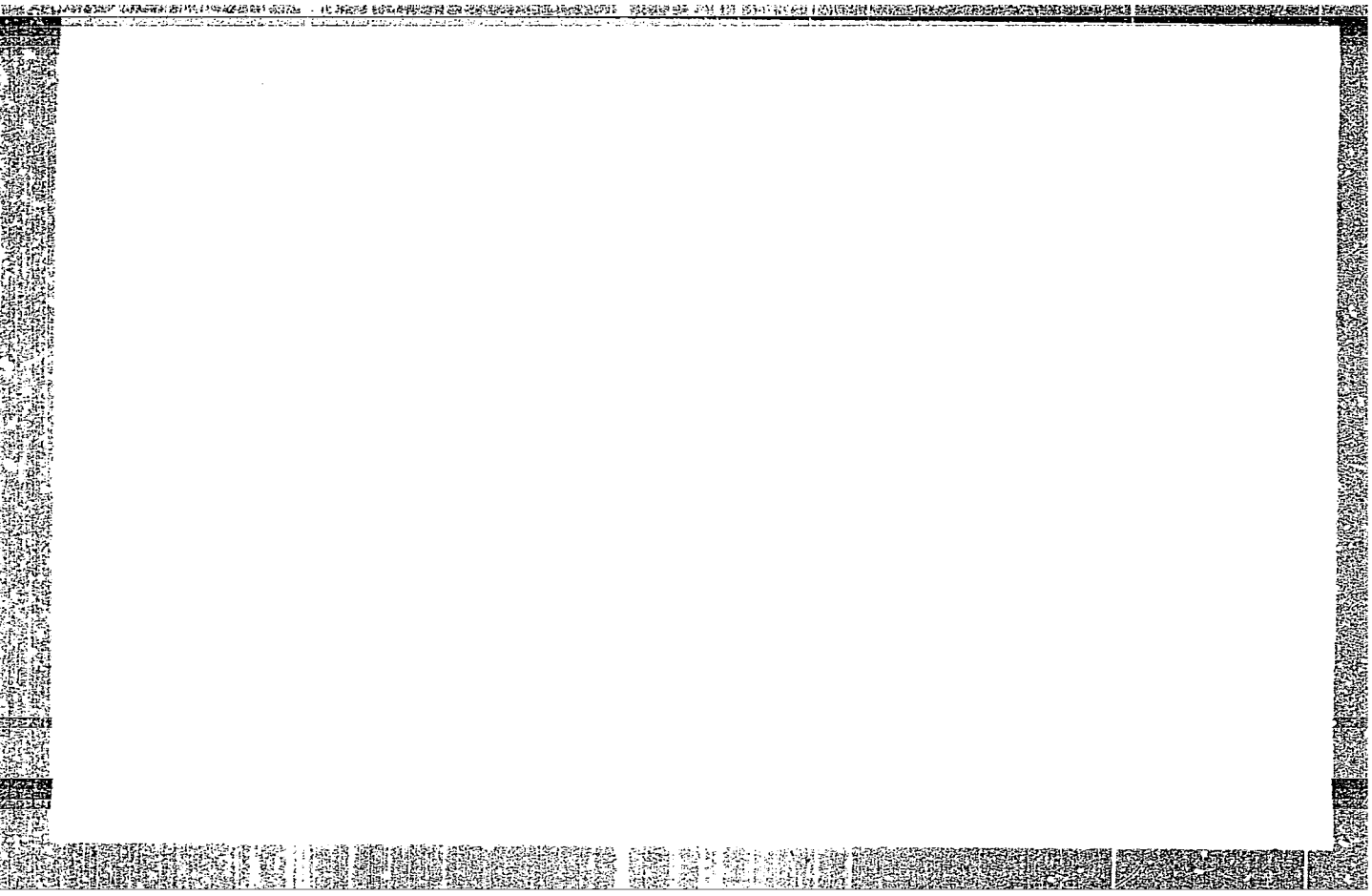
LOMAKINA, N.N.: TRENINA, G.A.

Antibiotics of bacterial origin. Antibiotiki, Moskva 7 no.4: 3-18 '54 (MLRA 7:9)
(ANTIBIOTICS,
bact. antibiotics, review)

TRENINA, G.A.; GAUZE, G.F.; PREOBRAZHENSKAYA, T.P.; BRAZHNIKOVA, M.G.; SHAROVA, Yu.A.

Antivirubin, an antiviral antibiotic, produced by Actinomyces longispororuber [with summary in French. p.62] Antibiotiki 1 no.4: 9-13 Jl-Ag '56. (MLRA 9:11)

1. Institut po iskaniiu novykh antibiotikov AMN SSSR
(ACTINOMYCES
longispororuber, secretion of antivirubin, antibacterial eff.)
(ANTIBIOTICS
antivirubin, secretion by Actinomyces longispororuber, antibact. eff.)



TRENINA, G.A.

USSR/Microbiology - Antibiosis and Symbiosis. Antibiotics F-2

Abs Jour : Referat Zhurn - Biol. No 16, 25 Aug 1957, 68473

Author : Trenina, G.A., Ganze, G.F., Preobrzhenskaya, V.F., Brazhinkova, M.G., Sharova, Yu.A.

Title : Antivirubin-Antiviral Antibiotic Formed by Actinomyces longispororuber.

Orig Pub : Antibiotiki, 1956, 1, No 4-9-13, 62

Abstract : The morphologic, cultural and biochemical indications are stated for the most productive strain No 8173, in relation to antivirubin (I), isolated from desert soils of Kara-Kumov. The antibiotic accumulates mainly in the actinomycete mycelium. The optimal medium for formation of I is nutrient agar, containing Chottinger broth (30 mg % amino nitrogen), 1% glucose, and 0.5% sodium chloride. The fullest isolation of I is obtained by steeping the agar nutrient medium on which the product was cultivated in strong acetone and subsequent

Card 1/2

Abs Jour : Referat Zhurn - Biol. No 16, 25 Aug 1957, 68473

evaporation under vacuum. I is obtained in the form of a dry preparation containing 800 antistaphylococcus units per mg. I appears as a bright-red pigment with properties of a dye. Blood serum only insignificantly inactivates the antibiotic. The study of the spectrum of the antibacterial action of I demonstrated that it has a selective action on staphylococci, Bacillus mycoides and hay bacilli, weakly inhibits growth of intestinal bacilli and Candida albicans. I inactivates the tobacco mosaic virus , grippe virus, smallpox virus and does not act on bacteriophage.

GAUZE, G.F., KUDRINA, Ye.S., TRENINA, G.A., TOROPOVA, Ye.G., VYSHEPAN, Ye.D.

Formation of a new antibiotic actinoidin in cultures of Proactinomyces actinoides [with summary in English]. Antibiotiki 3 no.1:51-55 Ja-F'58 (MIRA 11:5)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.
(ANTIBIOTICS,
actinoidin, prod. by Poractinomyces actinoides (Rus))
(NOCARDIA,
Proactinomyces actinoides, prod. of actinoidin (Rus))

TRENINA G.A.

LOMAKINA, N.N.; TRENINA, G.A.

Antibiotics of bacterial origin; from data in foreign periodical literature. Antibiotiki 7 no.4:3-18 '54. (MLRA 7:9)
(Antibiotics)

TREMMA, E.

Pattantyus, G. Development of drainage and irrigation pumps. p. 467.
VIZUGYI KOZLEMENYEK. HYDRAULIC PROCEEDINGS, Budapest, Vol. (36) no. 4, 1954 (published 1955).

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955, Uncl.

USSR/Chemistry - Catalysis; Formaldehyde Mar 52

"Investigations in the Field of Acid Catalysis. I. Kinetics and Mechanism of the Reaction of Formaldehyde in Acidic Aqueous Solutions," M. S. Nemtsov, K. M. Trenke, All-Union Sci Res Inst of Synthetic Rubber imeni S. V. Lebedev

"Zhur Obshch Khim" Vol XXII, No 3, pp 415-429

Actual concn of methyl formiate in reaction products is larger than equil quantity, confirming Tishchenko's assumption of formation of intermediate ester. Cannizzaro-Tishchenko reaction proceeds in 2 stages, with rate of reaction detd by 2 parallel reactions. Kinetic eq was studied. Order of

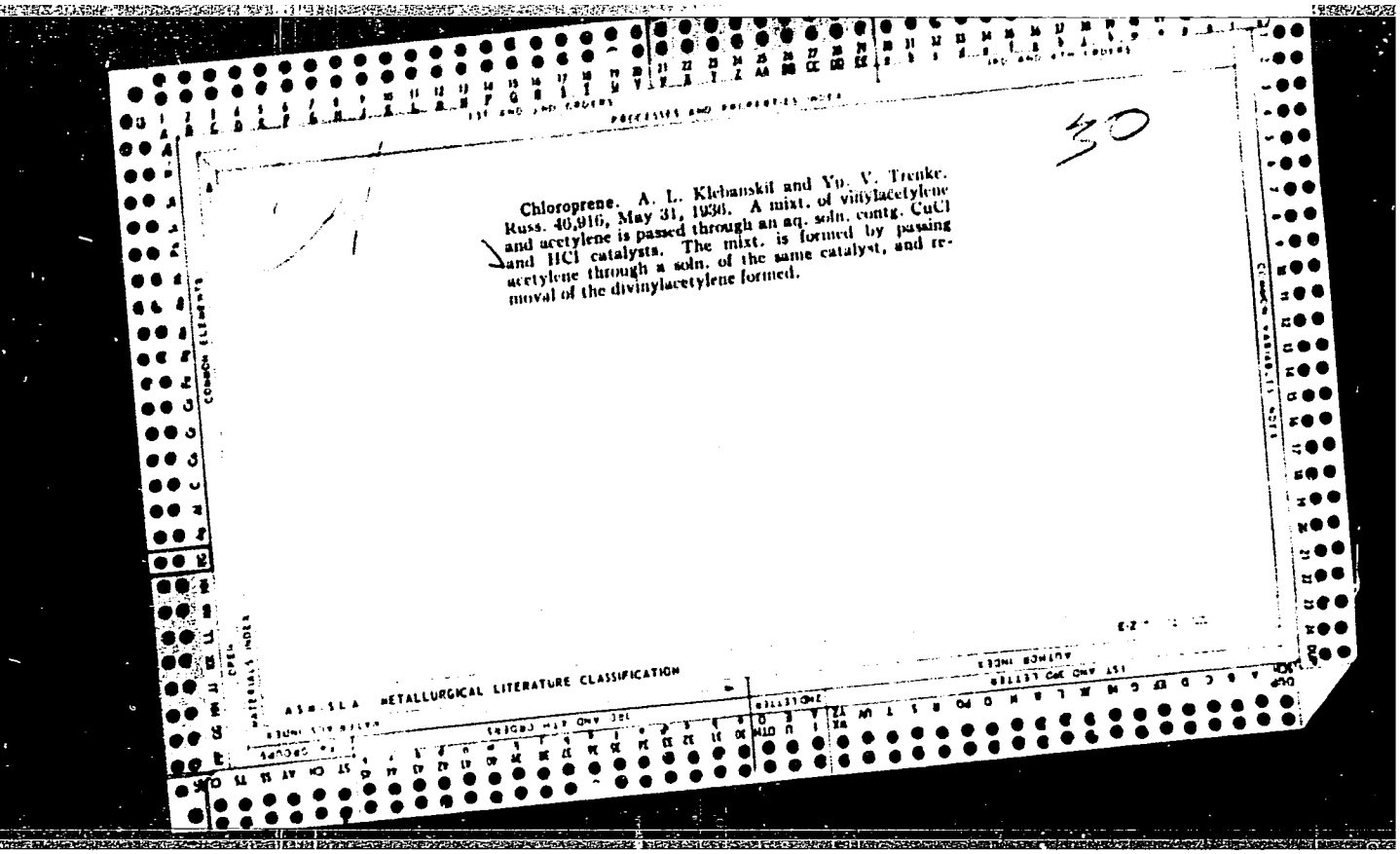
209T39

USSR/Chemistry - Catalysis; Formaldehyde Mar 52
(Contd)

magnitude of equil const of formation was detd. Approx consts of rate of reaction between active complexes and between complexes and free mols of methylene glycol were detd. In addn to normal reaction, methylal is formed in the reaction between formaldehyde and the methanol which forms.

209T39

TRENKE, K. M.



Chloroprene. A. L. Klebanskii and Yu. V. Trenke. Russ. 40,916, May 31, 1936. A mixt. of vinylacetylene and acetylene is passed through an aq. soln. contg. CuCl and HCl catalysts. The mixt. is formed by passing acetylene through a soln. of the same catalyst, and removal of the divinylacetylene formed.

PODDUBNYY, I.Ya.; KARTSEV, V.N.; AVER'YANOV, S.V.; TRENKE, Yu.V.; AVER'YANOVA, L.A.; YEVDOKIMOV, V.F.

Vulcanization of polydimethysiloxane rubber subjected to radiation. Kauch.i rez. 19 no.9:5-15 S '60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V.Lebedeva.
(Siloxane) (Gamma rays) (Vulcanization)

KLEBANSKIY, A.L.; TSUKERMAN, N.Ya.; KARTSEV, V.N.; LABUTIN, A.L.; TRENKE, Yu.V.; MAL'SHINA, L.P.; BOROVIKOVA, N.A.; KARELINA, G.G.; ROZHKOV, Yu.P.

Liquid nairit, a new type of chloroprene rubber. Kauch.i rez. 20 no.20:1-5 My '61. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issleodvatel'skiy institut sinteticheskogo kauchuka im. S.V.Lebedeva.
(Rubber, Synthetic) (Neoprene)

S/138/60/000/008/003/015
A051/A029

AUTHORS: Klebanskiy. A.L.; Fomina, L.P.; Kartsev, V.N.; Trenke, Yu.V.

TITLE: The Effect of Various Types of Stabilizers on the Change in Nairite Properties During Aging

PERIODICAL: Kauchuk i Rezina, 1960, No. 8, pp. 9 - 13

TEXT: The authors studied the selection of more effective stabilizers of Nairite (chloroprene rubber) than those commonly used, such as thiuram E (2.5%) combined with neozone (an antioxidant, phenyl-beta-naphthylamine, 2%). Since the oxidizing effect of air on the stability of Nairite is considered one of the main factors during its storage and vulcanization for avoiding scorching especially at elevated temperatures, the proper selection of stabilizers acquires great significance. The effect of the above-mentioned commonly-used stabilizers was described in Refs. 2 and 3. These stabilizers, during longer storage periods at room temperature, as well as during the long-lasting processing of the mixtures at high temperatures (over 120°C), do not ensure a sufficient stabilizing effect of the Nairite: the plasticity of the standard rubber mixtures drops when these are heated for 1 hour. This drop in plasticity is assumed to be connected with the scorching effect of Nairite. In choosing the proper stabilizers, the structural charac-

Card 1/5

The Effect of Various Types of Stabilizers on the Change in Nairite Properties During Aging

teristic of Nairite are considered, and thus the structuralizing features of the latter. It is deducted therefrom that in order to stabilize Nairite, a complex of substances must be used which is capable of preventing the oxidizing processes of the chloroprene, and bind the easily detachable hydrogen chloride. Two groups of compounds were investigated as anti-oxidants: phenyl-β-naphthylamine derivatives (neozone D) and polyphenols. During the oxidation of the rubber molecule an inactive polymer molecule is formed as well as a neozone D radical, which is no longer capable of continuing the growth of the chain due to the stability. It is assumed that the anti-oxidizing effect of neozone could be increased by introducing polar substitutes (Cl, OH, etc) or substitutes containing conjugated systems of double bonds (Ref. 3). However, it was found in investigating other compounds, such as diphenylthiazine ($C_6H_4NHSC_6H_4$), phenylnaphthylthiazine ($C_6H_4NHSC_{10}H_6$), diphenylphenylenediamine ($C_6H_5NHC_6H_4NHC_6H_5$), dinaphthylphenylenediamine ($C_{10}H_7NHC_6H_4NHC_{10}H_7$), oxyneozone ($C_{10}H_7NHC_6H_4OH$), that in the formation of radicals from these compounds less energy is spent, than from neozone D, and it is further assumed that these radicals formed would be more stable, and less given to a shift in

The Effect of Various Types of Stabilizers on the Change in Nairite Properties During Aging

the chains. Based on these assumptions, it is stated that the listed compounds would be better and more effective inhibitors of the oxidizing processes, than neozone D. The application of neozone D derivatives, with polar substitutes (oxy--group, sulfide bonds) as stabilizers, or increasing the degree of linkage (di-phenyl- and dinaphthylphenylenediamines), does not increase the stability of Nairite. It does, however, increase its tendency to scorching during thermal aging (120 hours at 70°C). From these observations it is concluded that the scorching mechanism of the chloroprene polymers is not dependent on the oxidizing processes, but is due rather to the radical decay of the molecules along the polysulfide bonds forming polymer radicals, which in the presence of thiuram and other compounds, recombine with their radicals. Further deliberation follows on the disadvantages of neozone as an oxidizing inhibitor. As to the polyphenols in the role of stabilizers, it was found that in testing compounds containing phenol and oxide groups (lignin, dimethylphenyl-n-cresol, paraditertiarybutyldioxyphenylene-sulfide), these also had a negative effect on the stability of Nairite, increasing the scorching tendencies (Fig. 3). The accelerating effect of the phenols in this connection is thought to be associated with the fact that in the presence of a

The Effect of Various Types of Stabilizers on the Change in Nairite Properties During Aging

base they react with the mobile tertiary chlorine atom in the polymer and cause a suturing together of the polymer molecule. Compounds containing one phenol group were also investigated, such as α- and β-naphthol and ditertiarybutylphenol. Their stabilizing effect was determined from the change in solubility in thermal mastication. It was found that these monophenols, as well as the polyphenols, had a negative effect on the stability of Nairite. The dithiocarbamates of various metals, such as dibutyl- and diethyldithiocarbamate of nickel, magnesium, bismuth and lead, were also checked for stabilizing effects. It was established that with the introduction of 1 - 2% of nickel dibuthyldithiocarbamate, in addition to neozone D and replacing it, the stability to thermal aging of the rubber and the vulcanizates was increased and the scorching of the rubber mixtures was prevented. However, the latter do not increase the stability of Nairite. Nickel dibutyldithiocarbamate was found to increase the stability of Nairite to ozone, using a 1 - 2% quantity of the stabilizer, by comparison to mass-produced Nairite. From the latter it is concluded that nickel diethyldithiocarbamates do not have a similar stabilizing effect on the Nairite. There are 5 figures, 1 table, 3 references.

Card 4/5

S/138/60/000/008/003/015
A051/A029

The Effect of Various Types of Stabilizers on the Change in Nairite Properties During Aging

2 Soviet, 1 English.

ASSOCIATION: Vsesoyuznyy Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva (Scientific Research Institute of Synthetic Rubber imeni S.V. Lebedev)

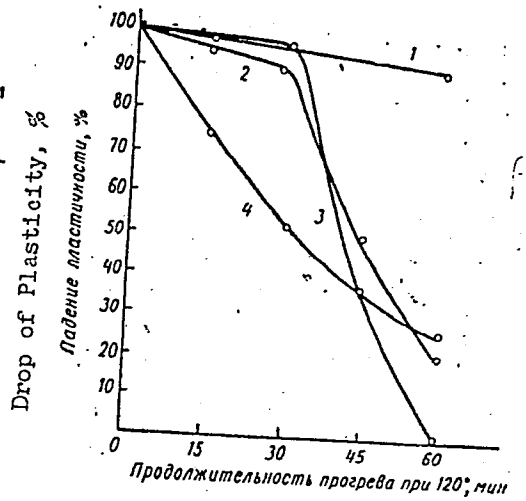


Figure 3: The Effect of Polyphenols on the Stability of Nairite:

1 - Control; 2 - 2% dimethyl-phenyl-n-cresol; 3 - 2% para-ditertiarybutyldioxyphenylene-sulfide; 4 - 2% lignin.

Card 5/5

KLEBANSKIY, A.L., KARTSEV, V.N., FORMINA, L.P., TRENKE, Yu.V.

Effect of impurities in chloroprene on the stability of nairit rubber. Kauch.i rez. 19 no.7:1-3 Jl '60. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva.
(Rubber, Synthetic) (Chloroprene)

KLEBANSKIY, A.L.; FOMINA, L.P.; KARTSEV, V.N.; TRENKE, Yu.V.

Influence of various types of stabilizers on the changes in the properties of nairit rubber during aging. Kauch.i rez. 19 no.8:9-13 Ag '60. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V.Lebedeva.
(Rubber, Synthetic)